

AMENDMENTS TO THE CLAIMS

Please add new claims 128-130, as indicated below.

1-61. Canceled

62. (Previously presented) A telemetry system for measuring one or more parameters within a transport container and transmitting a signal indicating the value or values of the one or more measured parameters, or the status of the respective transport container, over a significant distance via at least one communications network, the system comprising:

a) a receiving station connected to the communications network;

b) monitoring means for receiving the signal and indicating the value or any one of the values represented by the signal, or the transport container status; and

c) a mobile monitoring sub-system mounted on or within the transport container comprising:

i) parameter measurement means to measure the respective parameters;

ii) signal generating means to generate a signal for transmission indicating the value or values of the one or more

measured parameters, or a status of the transport container, wherein the signal generating means holds data tolerance information in relation to the respective transport container and, when the signal generated by the signal generating means is to be transmitted, the signal generating means examines the value or values of the one or more measured parameters and if they are in tolerance, generates a status signal indicating that the system is operating correctly and all parameters are in tolerance and if they are not in tolerance, the signal generating means generates the signal representing the value or values of the one or more measured parameters; and

iii) local communication means for transmitting the signal via the at least one communications network to the receiving station and the monitoring means.

63. (Previously presented) The telemetry system of claim 62, wherein the local communication means includes a local transceiver which collects the signals from each mobile monitoring sub-system and transmits the signals to the receiving station via the at least one communications network.

64. (Previously presented) The telemetry system of claim 63, wherein the system measures one or more parameters within one of a plurality of transport containers located in close proximity to one

another during transit, and wherein each of the plurality of transport containers includes one of the mobile monitoring sub-systems, each of the mobile monitoring sub-systems being capable of receiving information transmitted from others of the mobile monitoring sub-systems, and one of the mobile monitoring sub-systems is a master mobile monitoring sub-system for receiving signals from others of the mobile monitoring sub-systems, whereby the master mobile monitoring sub-system receives the information signals from said other ones of the mobile monitoring sub-systems and transmits them to the local transceiver.

65. (Previously presented) The telemetry system of claim 63, wherein the at least one communications network is a land based communications network and the local transceiver is a relay transceiver connected to the land based network.

66. (Previously presented) The telemetry system of claim 63, wherein the at least one communications network includes a satellite and the local transceiver is a relay transceiver, arranged only to transmit on an interrogation from the satellite.

67. (Previously presented) The system as claimed in claim 63, wherein the at least one communications network includes a satellite and the local transceiver is a relay transceiver arranged

to initiate communication with a transponder mounted on the satellite.

68. (Previously presented) The system as claimed in claim 63, wherein the local communication means comprises a low power transmitter in each monitoring sub-system which communicates with the local transceiver.

69. (Previously presented) The system as claimed in claim 63, wherein the transport container is a shipping container of the type used for sea transportation.

70. (Previously presented) The system as claimed in claim 63, wherein a plurality of transport containers are fitted with monitoring sub-systems and each transmits information, as required, to others of the transport containers similarly fitted with monitoring sub-systems, one of the transport containers is fitted with a master monitoring sub-systems for receiving signals from the monitoring sub-systems of other transport containers and the master monitoring sub-system collects all of the information signals from all of the other monitoring sub-systems the information signals and transmits to the transceiver which then transmits the information signals to the communications network.

71. (Previously presented) The system as claimed in claim 63, wherein at least some of the monitoring sub-systems located in the transport containers are interconnected to one another or to the master monitoring sub-system by wire connections.

72. (Previously presented) The system as claimed in claim 63, wherein at least some of the monitoring sub-systems located in the transport containers are in communication with each other and the master monitoring sub-systems via wireless communication means.

73. (Previously presented) The system as claimed in claim 63, wherein monitoring functions of the mobile monitoring sub-systems include an input for monitoring one or more of, temperature, humidity, air flow, air pressure, percentage atmospheric content of oxygen, or ethylene in air in the transport container, the location, shock, power supply parameters, filtration operation, illumination levels, security breaches, surveillance camera operation and motion detection.

74. (Previously presented) The system of claim 73, wherein measured parameters are used to predict a projected state of a perishable cargo at the end of a journey, from a history of the conditions to which the cargo has been subjected up to the current point in the journey.

75. (Previously presented) The system as claimed in claim 73, wherein the measurement of the one or more parameters by a stand alone data logging device, causes one or more parameter values to be measured, the data logging device including measurement means for measuring the parameter values, storage means to record the measured parameter values and control means to periodically cause the measurement to be made and recorded in the storage means.

76. (Previously presented) The system as claimed in claim 75, wherein the parameters measured are temperature and humidity.

77. (Previously presented) The system as claimed in claim 75, wherein the storage means is a digital memory.

78. (Previously presented) The system as claimed in claim 75, wherein the storage means is a magnetic storage device.

79. (Previously presented) The system as claimed in claim 75, wherein the storage means is a floppy disk drive.

80. (Previously presented) The system as claimed in claim 75, wherein the control means includes an input/output means for receiving a trigger signal to trigger the down loading of data and in response to the trigger signal, and generating an output signal

representing some or all of the data held in the storage means.

81. (Previously presented) The system as claimed in claim 80, wherein the control means records the parameter values at regular intervals.

82. (Previously presented) The system of claim 81, wherein the control means records the parameter values at intervals in the range of once every 10 minutes to 2 hours.

83. (Previously presented) The system as claimed in claim 75, wherein the control means comprises a control unit connected to the data logging device and to the local communication means and controls transmission via the at least one transceiver.

84. (Previously presented) The system of claim 83, wherein the control unit periodically initiates downloading of the data from the data logging device and initiates a transmission automatically.

85. (Previously presented) The system of claim 83, wherein the control unit responds to a signal transmitted to the communication means via the transceiver to initiate unloading of the data from the data logging device and transmission of the data

to the receiving station.

86. (Previously presented) The system as claimed in claim 62 wherein the local communication means is a transmitter arranged to transmit to a local transceiver which in turn relays the signal to the receiving station via pre-existing communications channels.

87. (Previously presented) The system as claimed in claim 86, wherein the pre-existing communications system includes a communications channel associated with a satellite navigation system.

88. (Previously presented) The system as claimed in claim 86, wherein the pre-existing communications system includes a communications channel of a satellite telephone system.

89. (Previously presented) The system of claim 86, wherein the pre-existing communications system is a switched telephone network.

90. (Previously presented) A remote sensing unit for a telemetry system, the remote sensing unit comprising:

parameter measurement means to measure a parameter or parameters of interest;

control means which holds data tolerance information for the or each parameter and when parameter data is provided by the parameter measurement means, the control means examines the parameter data and if it is within tolerance by comparison with the data tolerance information, indicates that the system is operating correctly and all data is in tolerance;

signal generating means to generate a signal indicating the status of the parameter data, the signal comprising:

i) if the parameter data is in tolerance, a status code indicating the in tolerance status of the parameters; and

ii) if the parameter data is out of tolerance, the parameter data; and

communication means for transmitting the signal to a relay transceiver, located in close proximity to the communication means, the relay transceiver being in communication with a communication network for further transmission via the communication network.

91. (Previously presented) The sensing unit as claimed in claim 90, wherein communication means is a low power transmitter which communicates with the relay transceiver.

92. (Previously presented) The sensing unit as claimed in claim 90, wherein monitoring functions of the remote sensing unit include, an input for monitoring one or more of, temperature,

humidity, air flow, air pressure, percentage atmospheric content of oxygen, or ethylene in air, location, shock, power supply parameters, filtration operation, illumination levels, security breaches, surveillance camera operation and motion detection.

93. (Previously presented) The sensing unit as claimed in claim 90, wherein the measurement of the one or more parameters by a stand alone data logging device causes one or more parameter values to be measured, the data logging device including measurement means for measuring the parameter values, storage means to record the measured parameter values and wherein the control means periodically causes the measurement to be made and recorded in the storage means.

94. (Previously presented) The sensing unit as claimed in claim 93, wherein the parameter measures are temperature and humidity.

95. (Previously presented) The sensing unit as claimed in claim 93, wherein the storage means is a digital memory.

96. (Previously presented) The sensing unit as claimed in claim 93, wherein the storage means is a magnetic storage device.

97. (Previously presented) The sensing unit as claimed in claim 93, wherein the storage means is a floppy disk drive.

98. (Previously presented) The sensing unit as claimed in claim 90, wherein the control means includes an input/output means for receiving a trigger signal to trigger the down loading of data and in response to the trigger signal, and generating an output signal representing some or all of the data held in the storage means.

99. (Previously presented) The sensing unit as claimed in claim 98, wherein the control means records the parameter values at regular intervals.

100. (Previously presented) The sensing unit of claim 99, wherein the control means records the parameter values at intervals in the range of once every 10 minutes to 2 hours.

101. (Previously presented) The sensing unit as claimed in claim 93, wherein the control means comprises a control unit connected to the data logging device and to the communication means and controls transmission via the at least one transceiver.

102. (Previously presented) The sensing unit of claim 101, wherein the control unit periodically initiates downloading of the data from the data logging device and initiates a transmission automatically.

103. (Previously presented) The sensing unit of claim 102, wherein the control unit responds to a signal transmitted to the communication means via the transceiver to initiate unloading of the data from the data logging device and transmission of the data to the receiving station.

104. (Previously presented) A control unit arranged to be connectable to a data logging device, the control unit comprising:

trigger signal generating means to trigger the data logging device to unload data;

data input means to receive data from the connected data logging device;

a data storage means to hold data tolerance information whereby when the data is unloaded from the data logging device, the control unit examines the unloaded data and determines if it is in tolerance when compared with the data tolerance information;

signal generating means to generate a signal indicating the status of the unloaded data, the signal comprising:

i) if the data is in tolerance, a status code indicating

the in tolerance status of the data; and

ii) if the data is out of tolerance, the unloaded data encoded in a format suitable for transmission over a communications network; and

input/output means arranged for connection to a communications device for communicating the signal generated by the signal generating means to the communication device.

105. (Previously presented) The control unit as claimed in claim 104, wherein monitoring functions of the data logging device include, an input for monitoring one or more of, temperature, humidity, air flow, air pressure, percentage atmospheric content of oxygen, or ethylene in air, a current location, shock, power supply parameters, filtration operation, illumination levels, security breaches, surveillance camera operation and motion detection.

106. (Previously presented) The control unit of claim 104, wherein the monitoring functions of the data logging device include an input for measuring power supply conditions of environmental control equipment supporting or forming part of a consignment, shaft speed of the vessel, water purity in a bilge, pollution levels, status of pollution control equipment, machinery discharge, sewage outflows, discharge of ships' ballast, noise, air quality, water quality, vessel position (eg; GPS), surveillance cameras,

locking and unlocking of controlled spaces, and entry and exit of controlled spaces.

107. (Previously presented) The control unit as claimed in claim 104, wherein the measurement of the one or more parameters by the data logging device, includes measurement means for measuring one or more parameter values, and storage means to record the measured parameter values, the data logging device being responsive to the control unit to periodically cause the measurement to be made and recorded in the storage means.

108. (Previously presented) The control unit as claimed in claim 107, wherein the parameters measured are temperature and humidity.

109. (Previously presented) The control unit as claimed in claim 107, wherein the storage means is a digital memory.

110. (Previously presented) The control unit as claimed in claim 107, wherein the storage means is a magnetic storage device.

111. (Previously presented) The control unit as claimed in claim 107, wherein the storage means is a floppy disk drive.

112. (Previously presented) The control unit as claimed in claim 104, further comprising an input/output means for receiving a trigger signal to trigger the down loading of data and generating an output signal representing some or all of the data held in the storage means in response to the trigger signal.

113. (Previously presented) The control unit as claimed in claim 112, wherein the control unit causes the data logging device to record the parameter values at regular intervals.

114. (Previously presented) The control unit of claim 113, wherein the data logging device records the parameter values at intervals in the range of once every 10 minutes to 2 hours.

115. (Previously presented) The control unit as claimed in claim 104, comprising a communication control means connected to the data logging device and to the communications device which controls communication of the signal generated by the signal generating means to the communication device.

116. (Previously presented) The control unit of claim 115, wherein the trigger signal generating means periodically initiates downloading of the data from the data logging device and the communication control means initiates a transmission over a

communication network automatically.

117. (Previously presented) A telemetry system for measuring one or more parameters within a transport vehicle or vessel and transmitting a signal indicating the value or values of the one or more measured parameters, or the status of the respective transport vehicle or vessel, over a significant distance via at least one communications network, the system comprising:

a) a receiving station connected to the communications network;

b) monitoring means for receiving the signal and indicating the value or any one of the values represented by the signal, or the transport vehicle or vessel status; and

c) a mobile monitoring sub-system mounted on or within the transport vehicle or vessel comprising:

i) parameter measurement means to measure the respective parameters;

ii) signal generating means to generate a signal for transmission indicating the value or values of the one or more measured parameters, or a status of the transport vehicle or vessel, wherein the signal generating means holds data tolerance information in relation to the respective transport vehicle or vessel and, when the signal generated by the signal generating means is to be transmitted, the signal generating means examines

the value or values of the one or more measured parameters and if they are in tolerance, generates a status signal indicating that the system is operating correctly and all parameters are in tolerance and if they are not in tolerance, the signal generating means generates the signal representing the value or values of the one or more measured parameters; and

iii) local communication means for transmitting the signal via the at least one communications network to the receiving station and the monitoring means.

118. (Previously presented) The telemetry system of claim 117, wherein the local communication means includes a local transceiver which collects the signals from each mobile monitoring sub-system and transmits the signals to the receiving station via the at least one communications network.

119. (Previously presented) The telemetry system of claim 117, wherein the system measures one or more parameters within close proximity of one of a plurality of mobile monitoring sub-systems located around the transport vehicle or vessel, each of the mobile monitoring sub-systems being capable of receiving information transmitted from others of the mobile monitoring sub-systems, and one of the mobile monitoring sub-systems is a master mobile monitoring sub-system for receiving signals from others of the

mobile monitoring sub-systems, whereby the master mobile monitoring sub-system receives the information signals from said other ones of the mobile monitoring sub-systems and transmits them to the local transceiver.

120. (Previously presented) The telemetry system as claimed in claim 117, wherein the at least one communications network is a land based communications network and the local transceiver is a relay transceiver connected to the land based network.

121. (Previously presented) The telemetry system as claimed in claim 117, wherein the at least one communications network includes a satellite and the local transceiver is a relay transceiver, arranged only to transmit on an interrogation from the satellite.

122. (Previously presented) The system as claimed in claim 117, wherein the at least one communications network includes a satellite and the local transceiver is a relay transceiver arranged to initiate communication with a satellite mounted transponder.

123. (Previously presented) The system as claimed in claim 117, wherein the local communication means comprises a low power transmitter in each monitoring sub-system which communicates with the local transceiver.

124. (Previously presented) The system as claimed in claim 117, wherein the parameter measurement means and the signal generating means are located in a fixed location in the transport vehicle or vessel and the communications means is a low power transmitter which communicates with the transceivers.

125. (Previously presented) The system of claim 124, wherein the parameter measurement means and the signal generating means are mounted in an equipment space of a ship.

126. (Previously presented) The system of claim 125, wherein the parameter measurement means measures ballast water quality and status of ballast dumping valves.

127. (Previously presented) The system of claim 124, wherein the monitoring functions of the mobile monitoring sub-systems include an input for measuring power supply conditions of environmental control equipment or equipment supporting or forming part of a consignment, shaft speed of the vessel, water purity in a bilge, filtration operation, illumination levels, pollution levels, security breaches, surveillance camera operation or motion detection, status of pollution control equipment, machinery discharge, sewage outflows, discharge of ships' ballast, noise, air quality, water quality, vessel position, surveillance cameras,

locking and unlocking of controlled spaces, and entry and exit of controlled spaces.

128. (New) A control unit arranged to be connectable to a data logging device, the control unit comprising:

trigger signal generating means to trigger the data logging device to unload data;

data input means to receive data from the connected data logging device;

a data storage means to hold data tolerance information whereby when the data is unloaded from the data logging device, the control unit examines the unloaded data and determines if it is in tolerance when compared with the data tolerance information;

signal generating means to generate a signal indicating the status of the unloaded data, the signal comprising:

i) if the data is in tolerance, a status code indicating the in tolerance status of the data; and

ii) if the data is out of tolerance, the unloaded data encoded in a format suitable for transmission over a communications network; and

input/output means arranged for connection to a communications device for communicating the signal generated by the signal generating means to the communication device,

and wherein the monitoring functions of the data logging

device include an input for measuring power supply conditions of environmental control equipment supporting or forming part of a consignment, shaft speed of the vessel, water purity in a bilge, pollution levels, status of pollution control equipment, machinery discharge, sewage outflows, discharge of ships' ballast, noise, air quality, water quality, vessel position, surveillance cameras, locking and unlocking of controlled spaces, and entry and exit of controlled spaces.

129. (New) A telemetry system for measuring one or more parameters within a transport vehicle or vessel and transmitting a signal indicating the value or values of the one or more measured parameters, or the status of the respective transport vehicle or vessel, over a significant distance via at least one communications network, the system comprising:

a) a receiving station connected to the communications network;

b) monitoring means for receiving the signal and indicating the value or any one of the values represented by the signal, or the transport vehicle or vessel status; and

c) a mobile monitoring sub-system mounted on or within the transport vehicle or vessel comprising:

i) parameter measurement means to measure the respective

parameters;

ii) signal generating means to generate a signal for transmission indicating the value or values of the one or more measured parameters, or a status of the transport vehicle or vessel, wherein the signal generating means holds data tolerance information in relation to the respective transport vehicle or vessel and, when the signal generated by the signal generating means is to be transmitted, the signal generating means examines the value or values of the one or more measured parameters and if they are in tolerance, generates a status signal indicating that the system is operating correctly and all parameters are in tolerance and if they are not in tolerance, the signal generating means generates the signal representing the value or values of the one or more measured parameters; and

iii) local communication means for transmitting the signal via the at least one communications network to the receiving station and the monitoring means,

wherein the parameter measurement means and the signal generating means are located in a fixed location within an equipment space of a ship and the communications means is a low power transmitter which communicates with the

transceivers and the parameter measurement means measures ballast water quality and status of ballast dumping valves.

130. (New) A telemetry system for measuring one or more parameters within a transport vehicle or vessel and transmitting a signal indicating the value or values of the one or more measured parameters, or the status of the respective transport vehicle or vessel, over a significant distance via at least one communications network, the system comprising:

a) a receiving station connected to the communications network;

b) monitoring means for receiving the signal and indicating the value or any one of the values represented by the signal, or the transport vehicle or vessel status; and

c) a mobile monitoring sub-system mounted on or within the transport vehicle or vessel comprising:

i) parameter measurement means to measure the respective parameters;

ii) signal generating means to generate a signal for transmission indicating the value or values of the one or more measured parameters, or a status of the transport vehicle or vessel, wherein the signal generating means holds data tolerance information in relation to the

respective transport vehicle or vessel and, when the signal generated by the signal generating means is to be transmitted, the signal generating means examines the value or values of the one or more measured parameters and if they are in tolerance, generates a status signal indicating that the system is operating correctly and all parameters are in tolerance and if they are not in tolerance, the signal generating means generates the signal representing the value or values of the one or more measured parameters; and

iii) local communication means for transmitting the signal via the at least one communications network to the receiving station and the monitoring means,

wherein the parameter measurement means and the signal generating means are located in a fixed location in the transport vehicle or vessel and the communications means is a low power transmitter which communicates with the transceivers, and the monitoring functions of the mobile monitoring sub-system include an input for measuring power supply conditions of environmental control equipment or equipment supporting or forming part of a consignment, shaft speed of the vessel, water purity in a

bilge, filtration operation, illumination levels, pollution levels, security breaches, surveillance camera operation or motion detection, status of pollution control equipment, machinery discharge, sewage outflows, discharge of ships' ballast, noise, air quality, water quality, vessel position, surveillance cameras, locking and unlocking of controlled spaces, and entry and exit of controlled spaces.